

BIBLIOGRAPHICAL RECORD.

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A colon after initial designates the most common given name, as: A: Augustus; B: Benjamin; C: Charles; D: David; E: Edward; F: Frederic; G: George; H: Henry; I: Isaac; J: John; K: Karl; L: Louis; M: Mark; N: Nicholas; O: Otto; P: Peter; R: Richard; S: Samuel; T: Thomas; W: William. The initials at the end of each record, or note, are those of the recorder.

Corrections of errors and notices of omissions are solicited.

Anderson, Joseph, jr. Aphides and their partiality for strongly-scented plants. (Entomologist, June 1885, v. 18, p. 173-174.)

Notes the preference of *aphididae* for strongly-scented conservatory plants, and plants bearing fragrant flowers. G: D. (3885)

Ashmead, W: Harris. On a parasite bred from the eggs of the orange tree plant bug; being another insect friend of the orange grower. (Florida agriculturist, 2 Nov. 1881, v. 4, no. 25, p. 193, col. 1-2, 56 cm.)

Describes *telenomus brochymenae*, a new species of *proctotrupidae*, parasitic upon the eggs of *brochymena arborea*, and gives notes on its habits. G: D. (3886)

Bailey, James Spencer. The natural history of *cossus centerensis* (Can. entom., Jan. 1879, v. 11, p. 1-5, pl.)

Figures and describes the larva, pupa and imago of *cossus centerensis*; gives notes on its habits: the larva bores in wood of *populus tremuloides*. G: D. (3887)

Barnard, G: Fruit versus sugar. (Entomologist, June 1885, v. 18, p. 160-161.)

Describes the mode of collecting lepidoptera by using fruit, in place of sugaring, as the author has practised in Queensland. G: D. (3888)

Barrett, C: Golding. The influence of meteorological conditions on insect life. (Entom. mo. mag., June 1882, v. 19, p. 1-8.)

Abstract, by B: P. Mann, with above title. (Psyche, Sept.-Oct. [16 Nov.] 1883, v. 4, p. 83-87.)

Effect of severely cold winters in promoting the abundance of certain species of lepidoptera, and of wet weather in destroying other species. B: P. M. (3889)

Bassett, Homer Franklin. New cynipidae. (Can. entom., 1881, v. 13: April, p. 74-79; May, p. 92-113.)

Describes 24 new species of *cynipidae*. G: D. (3890)

Bijerinck, M. W. [Heterogonie der cynipiden.] (Entom. nachrichten, 1 March 1880, jahrg. 6, p. 45-46.)

Notice. (Entom. nachrichten, 1 April 1880, jahrg. 6, p. 71.)

Dimorphism and mode of oviposition of *biorhiza aptera*. G: D. (3891)

Bell, James Thompson. [On *alaus*.] (Can. entom., May 1881, v. 13, p. 116.)

Answer to J: L. Le Conte's "[On *alaus gorgops*]" (Can. entom., April 1881, v. 13, p. 80) (Rec., 2888). G: D. (3892)

Berlese, Antonio. Acarorum systematis specimen. (Bull. Soc. entom. ital., 1885, an. 17, p. 121-135.)

Classificatory table of the *acar*i, extending to genera; the families are as follows: *demodicidae* (including the *phytopti*), *sarcoptidae*, *oribatidae*, *gamasidae*, *ixodidae*, *trombididae* and *hoplopidae*. G: D. (3893)

Bettany, G. T. The galleries of the cutting ants of Texas. (Nature, 16 Oct. 1879, v. 20, p. 583, 23 cm.) (Littell's living age, 22 Nov. 1879, s. 5, v. 28, p. 512, 33 cm.)

Notes on the habits and habitations of *atta ferrens*, based on accounts given by H: C. McCook. G: D. (3894)

Biro, Lajos. Szabadban alvó méhek és darázsok. (Rovartani lapok, Aug. 1885, v. 2, p. 169-172; Résumé, p. 23-24.)

Observations on the posture of about twenty species of hymenoptera while asleep upon *centaurea arenaria*. G: D. (3895)

Blanchard, F: Note on the habits of *amphicomma vulpina*. (Bull. Brooklyn entom. soc., Apr. 1883, v. 5, p. 90.)

Record of occurrence and diurnal habits of *amphicomma vulpina* at Lowell, Mass. B: P. M. (3896)

Brauer, Friedrich. [Entwicklungsgeschichte der *hirmoncra obscura*.] (Verhandl. K.-k. zool.-botan. gesells. in Wien, 1883, jahrg. 33; Sitzb., p. 19.)

Notes on larvae of *hirmoncra obscura* which live in larvae of *rhizotrogus solstitialis*. G: D. (3897)

Breitenbach, Wilhelm. Ein neuer feind der honigbiene. (Entom. nachrichten, Feb. 1884, jahrg. 10, p. 42.)

An undetermined hemipteron destroys many honey bees (*apis mellifica*) in southern Brazil. G: D. (3898)

Buel, Jesse. The *saperda bivittata*, or apple borer. Mass. agric. repos. and Journ., July 1826, v. 9, no. 2, p. 191-195.)

Communicates a letter from Philip Hearst, describing the ravages of *saperda bivittata*, and a letter from T. Say, concerning the same insect, with a copy of Say's original description of it. B: P. M. (3899)

Cameron, P: Descriptions of new species of *tenthredinidae* and *cynipidae* from Mexico. (Trans. Entom. soc. Lond., 1884, p. 481-488.)

Describes 9 new species of *tenthredinidae* and 5 of *cynipidae*, all from Mexico. G: D. (3900)

Cameron, P: A monograph of the British phytophagous hymenoptera. *Tenthredo. sirix* and *cynips*, Linné. Vol. 1. Lond., Ray soc., 1882. 7 + 340 p., 21 pl., each with 1 p. expl., 27 p. [announcements of Ray soc.], 23 X 14, t 16.5 X 9.7.

Rev. (Ann. and mag. nat. hist., May 1885, s. 5, v. 15, p. 416-417.)

A general monographic work on the British phytophagous hymenoptera, to which are prefixed general statements, which may be comprised under the following heads, about these insects: external anatomy of the head, mouth-parts, thorax, legs, veins and their venation, abdomen, ovipositor, and male anal appendages; spiracles, coloration, secondary sexual characters; habits—such as food, feigning death, copulation, oviposition, and parthenogenesis; the egg, larval habits, time of food-plants of larvae of British species; anatomy of larvae, and the differences between these and lepidopterous larvae; protective coloration of the larvae, offensive secretions and other means by which some larvae are protected; synopsis of the larvae of British species; mode and localities of pupation, and external anatomy of the pupa; generic and specific characters of the phytophagous hymenoptera, their geographical distribution, their classification and literature; analytical tables of genera and species belonging to the British fauna, with descriptions, and notes on habits and habitats of each species. G: D. (3901)

Campbell, G: Douglas (GLASSELL), 8th duke of Argyll. Mimicry in moths. (Nature, 7 Dec. 1882, v. 27, p. 125-126, 24 cm.)

Notice and abstract, by F. P. Pascoe. (Trans. Entom. soc. Lond., 1883; Proc., p. 21.)

A moth, of a species unknown to the writer, was observed at Cannes, France, mimicking a crumpled leaf. G: D. (3902)

Chambers, Vactor Tousey. *Cicada septendecim* in Colorado. (Amer. entom., Mch. 1880, v. 3, n. s., v. 1, p. 77, 2 cm.)

Record of occurrence of *cicada septendecim* in Cheyenne cañon, Colorado, in June 1870. B: P. M. (3903)

Chambers, Vactor Tousey. Micro-lepidoptera. (Can. entom., July 1871, v. 3, p. 54-58.)

General remarks on the genus *lithocolletis*, its two forms of larva and the differences in their mines and habits; classification of the known North American species by their coloration, with descriptions of new species; characters, food-plants and habits of six species, of which three *l. liliacella*, *l. clemensella*, *l. caryae-albella* are new, with remarks on other species. [Cont., op. cit., Sep., p. 84-88 (Rec., 3905).] B: P. M. (3904)

Chambers, Vactor Tousey. Micro-lepidoptera. (Can. entom., Sep. 1871, v. 3, p. 84-88.)

[Cont. from op. cit., July, p. 54-58 (Rec., 3904).] Characters, food-plants and habits of four species of *lithocolletis*, of which one *l. virginiella* is new, with remarks on other species, including *anacamptis robinella*. [Cont., op. cit., Sep., p. 108-112 (Rec., 3906).] B: P. M. (3905)

Chambers, Vactor Tousey. Micro-lepidoptera. (Can. entom., Sep. 1871, v. 3, p. 108-112.)

[Cont. from op. cit., Sep., p. 84-88 (Rec., 3905).] Characters, food-plants and habits of seven species of *lithocolletis*, of which four *l. nonfasciella*, *l. bathonella*, *l. trititanella*, *l. coryliella* [? *coryllisella*?] are new, and *l. aesculidella* and *l. ostryoecella* are new varieties, tabular synopsis of the characters of the larvae of *l. coryliella*, *l. guttiferiella*, *l. aesculidella* and *l. ostryoecella*. [Cont., op. cit., Oct., p. 127-130 (Rec., 3907).] B: P. M. (3906)

Chambers, Vactor Tousey. Micro-lepidoptera. (Can. entom., Oct. 1871, v. 3, p. 127-130.)

[Cont. from op. cit., Sep., p. 108-112 (Rec., 3906).] Characters, food plants and habits of five species of *lithocolletis*, of which three *l. ambrosiella*, *l. celtifoliella*, *l. celtisella* are new. [Cont., op. cit., Oct., p. 149-149 (Rec., 3908).] B: P. M. (3907)

Chambers, Vactor Tousey. Micro-lepidoptera. (Can. entom., Oct. 1871, v. 3, p. 146-149.)

[Cont. from op. cit., Oct., p. 127-130 (Rec., 3907).] Characters, food-plants and habits of four species of *lithocolletis*, of which two *l. circumatella*, *l. albellata* are new. [Cont., op. cit., Nov., p. 161-166 (Rec., 3909).] B: P. M. (3908)

Chambers, Vactor Tousey. Micro-lepidoptera. (Can. entom., Nov. 1871, v. 3, p. 161-166.)

[Cont. from op. cit., Oct., p. 149-149 (Rec., 3908).] Characters, food-plants and habits of three species of *lithocolletis*, of which *l. oyatella* is new, with remarks on several others not known in the imago state. [Cont., op. cit., Nov., p. 182-185 (Rec., 3910).] B: P. M. (3909)

Chambers, Vactor Tousey. Micro-lepidoptera. (Can. entom., Nov. 1871, v. 3, p. 182-185.)

[Cont. from *op. cit.*, Nov., p. 101-106 (Rec., 3000).] Condensed account of species of *Lithocolletis* described by Clemens, Packard and Fitch, but unknown to author; discussion of the number and sequence of broods of several genera of *tinina*. [Cont., *op. cit.*, Dec., p. 205-200 (Rec., 3911).] *B: P. M.* (3910)

Chambers, Vactor Tousey. Micro-lepidoptera. (Can. entom., Dec. 1871, v. 3, p. 205-209.)

[Cont. from *op. cit.*, Nov., p. 182-185 (Rec., 3010).] Describes *leucanthiza? sandersella*, *phyllocnistis vitifoliella* and *ph. ampelopsella* as new species, and remarks upon the generic characters of *phyllocnistis*, *tischeria* and *remostoma*, and upon the North American species of these genera. [Cont., *op. cit.*, Dec., p. 221-224 (Rec., 3912).] *B: P. M.* (3911)

Chambers, Vactor Tousey. Micro-lepidoptera. (Can. entom., Dec. 1871, v. 3, p. 221-224.)

[Cont. from *op. cit.*, Dec., p. 205-200 (Rec., 3911).] Remarks upon the generic characters of *larveria* and *aspidisco*, and upon the North American species of these genera, including *lyonetta saratoga*; describes *larveria cephalanthiella* and *aspidisco ella* as new species. [Cont., *op. cit.*, Jan. 1872, v. 4, p. 7-12 (Rec., 3913).] *B: P. M.* (3912)

Chambers, Vactor Tousey. Micro-lepidoptera. (Can. entom., Jan. 1872, v. 4, p. 7-12.)

[Cont. from *op. cit.*, Dec. 1871, v. 3, p. 221-224 (Rec., 3912).] Remarks upon the generic characters of *gracilaria* ["*gracillaria*"], including *parectopa*, *coriscium* and *cuspilapteryx*; characters, food-plants and habits of five species of *gracilaria*, of which three (*g. eupatoriella*, *g. plantaginifella*, *g. 12-lineella*) are new. [Cont., *op. cit.*, Feb., p. 25-29.] *B: P. M.* (3913)

Chretien, P. De l'influence du froid sur les chrysalides. (Feuilles des jeunes naturalistes, May 1885, an. 15, p. 95-96.)

General resumé of the researches of W. H. Edwards upon the effect of cold upon the chrysalids of rhopalocera. *G: D.* (3914)

Clarke, Cora H. Description of two interesting houses made by native caddis-fly larvae. (Proc. Bost. soc. nat. hist., 24 May 1882, v. 22, p. 67-71, fig. 1-6.)

Separate, with t.-p. cover, p. 67-71, 24 X 15, 117 X 9.7; fig. 1-6.

Describes and figures the larval cases of a species of *hydropsyche* and one of *plectrocnemia*, found near Boston, Mass., and adds a few notes on the habits of their larvae and pupae. *G: D.* (3915)

Clemens, Brackenridge. Synopsis of families of heterocera. (Proc. Entom. soc. Philad., Mar. 1862, v. 1, p. 173-181.)

Reprint. (CLEMENS, B. *The tinina* of North America. . . Stainton. Lond., 1872, p. 195-206.)

Description of author's and of A. Guenée's methods of denuding wings of lepidoptera; definition of pterological terms; dichotomic synoptical table to discriminate all the families of *lepidoptera heterocera*; directions for using this table. *B: P. M.* (3916)

Clements, James. Description of the *oestrus ovis*, or the botts of sheep. (Amer. mo. mag. and crit. rev. . . Biglow. . . Feb. 1818, v. 2, no. 4, p. 249-250, 45 cm.)

Valuable description of larva and imago and method of attack of *oestrus ovis*. *B: P. M.* (3917)

Clifford, J. R. S. The urticating properties of the hairs of *parthesia chrysorrhoea*. (Entomologist, Jan. 1885, v. 18, p. 22-23.)

Notes on the stinging hairs and the urtication produced by them, in certain species of *bombycidae*. *G: D.* (3918)

Cockerell, T. D. A. Scientific nomenclature. (Entomologist, April 1885, v. 18, p. 120.)

The author objects to the extensive use of names of persons in scientific names of animals. *G: D.* (3919)

Cockerell, T. D. A. The urticating hairs of lepidoptera. (Entomologist, Mar. 1885, v. 18, p. 74-75.)

Coccons of *parthesia similis* which have been exposed to the weather for months, still produce urtication; the author thinks "this militates strongly against the theory of the effects being caused otherwise than by the mechanical properties of the hairs." *G: D.* (3920)

Coleman, Nathan. Notes on the changes in the larvae of *orgyia leucostigma*. (Journ. Bost. zool. soc., Oct. 1882, v. 1, p. 39-42.)

Account of observations made on changes of color in the larvae of *orgyia leucostigma*. *R. H.* (3921)

Coleman, Nathan. Notes on the larvae of certain heterocerous lepidoptera. (Journ. Bost. zool. soc., July 1882, v. 1, p. 28-29.)

Describes certain of the earlier stages of *carpocapsa pomonella*, *ageria cucurbitae* and *arctia isabella*. *R. H.* (3922)

Coleman, Nathan. *Papilio cresphontes* at Berlin, Conn. (Journ. Bost. zool. soc., Oct. 1882, v. 1, p. 53.)

Records the capture of a number of specimens of *papilio cresphontes* at Berlin, Conn. *R. H.* (3923)

Comber, T. Insects and colour in flowers. (Nature, 19 Nov. 1874, v. 11, p. 47, 13 cm.)

Thinks we cannot, with our present knowledge, decide whether beauty is an "object in nature." *G: D.* (3924)

Comstock, J: H. On the transmission of insects through the U. S. mails. (Amer. entom., Apr. 1880, v. 3, n. s., v. 1, p. 104, 23 cm.)

Statement of the laws in force in United States regarding the transmission of insects by mail; dead specimens, pinned or free, may be mailed if properly packed; live specimens can only be mailed in sealed letters. *B: P. M.* (3925)

Cook, Albert J. Another bee enemy. (Can. entom., Jan. 1879, v. 11, p. 17-20, fig. 1-8.)

Phymata erosa siezes bees and sucks their blood, and can sting quite severely; description of *ph. erosa*, with figures of the entire insect, its proboscis, its antenna, and its anterior and middle leg; predaceous habits, and bibliography of the species. *G: D.* (3926)

Cook, Albert J. Remarks on some insects injurious to vegetation, in Michigan. (7th ann. rept. secr. state board agric. Mich., for 1868, 1868 [1869]. p. 163-170.)

Characters of insects; occurrence and habits of, and means against, *doryphora decemlineata*, *cicada septendecim*, *dryocampa senatoria*, *sphinx quinquemaculata*, *carpocapsa pomonella*, *aspidiotus cochiformis*, and the *pomphigus* of *fagus*. B: P. M. (3927)

Cooke, E. Naphthaline. (Entomologist, April 1885, v. 18, p. 125-126.)

Notes some ill effects of using impure naphthalin in collections of insects. G: D. (3928)

Cooper, Joseph. Letter from Mr. Joseph Cooper to William Russel, esq. on the hessian fly and the early white wheat. (Papers on agric., Mass. soc. for promot. agric., 1799, p. 26-28.)

Ccidomyia destructor first appeared at Cooper's Point, N. J., in 1788; seasons of the insect, whose ravages may be diminished by late sowing of early white wheat. (3929)

Cope, E. Drinkard. On some new and little known myriapoda from the southern Alleghenies. (Trans. Amer. entom. soc., May 1870, v. 3, p. 65-67.)

Describes *peduserpes* n. g. [*polyzonidae*] and *p. rosulbus* n. sp.; remarks on the occurrence and habits of several myriapoda in Tennessee and North Carolina, and especially on the physical characters of the defensive secretions of *strongylia* and *sugentia*. B: P. M. (3930)

Corning, Erastus, jr. Naphthaline. (Entomologist, Oct. 1882, v. 15, p. 240.)

Advocates the use of naphthalin (C10H8) in natural history collections to prevent the ravages of museum pests. G: D. (3931)

Couper, W. Entomology. No. 1. (Can. entom., June 1871, v. 3, p. 32-35.)

Rev., in C. V. Riley's "Friendly notes" (*op. cit.*, Sep., p. 117-119).

Advice to beginners in entomology; recommends neatness, patience, the keeping of field note books, and the formation of collections illustrating insect architecture; states that "every species of insect has a peculiar mode of working in its early stages, and there is a kind of non-deviation in the work which a practical eye can trace." B: P. M. (3932)

Coverdale, G. Additional notes upon setting lepidoptera unpinned. (Entomologist, July 1885, v. 18, p. 183-188.)

Describes a mode of spreading the wings of lepidoptera and mounting them for the collection, which is especially applicable to microlepidoptera. The editor of the *Entomologist* (J. T. Carrington) appends a note on the method. G: D. (3933)

Cox, E. W. Intellect in brutes. (Nature, 31 July 1879, v. 20, p. 315, 29 cm.)

Reprint. (Saturday mag., 6 Dec. 1879. . .) [not seen.]

Describes actions of ants in carrying home a carcass of a cockroach (*blatta orientalis*), which go to show that the ants have intelligence and means of communication. G: D. (3934)

Cramer, A. W. Putnam. A new collecting ground. (Bull. Brooklyn entom. soc., Apr. 1883, v. 5, p. 99.)

Record of capture of two specimens of *catocala uni-juga* aboard a vessel on the way to Europe off the coast of Newfoundland. B: P. M. (3935)

Cricket's chirp and the temperature (The).

(Nature, 5 Jan. 1882, v. 25, p. 229, 5 cm.) (Sci. amer., 11 Mar. 1882, v. 46, p. 149, col. 3, 6 cm.)

Rule for estimating the temperature by the number of successive chirps of a cricket [*gryllus*]. G: D. (3936)

Dahl, Friedrich. Ueber den bau und die functionen des insectenbeines. Vorläufige mittheilung. Zool. anzeiger, 21 Jan. 1884. jahrg. 7, p. 38-41.)

Arrangement of certain muscles of the legs of insects; mode of attachment of the foot of insects to smooth surfaces; brushes, combs, and other apparatus pertaining to the use of the legs of insects in cleaning themselves. G: D. (3937)

DeGrey, T. *lord Walsingham.* North American *tortricidae*. (Trans. Entom. soc. Lond., 1884, p. 121-147, pl. 4.)

List, with notes, of species of *tortricidae* sent the author by H. K. Morrison, including specimens from Arizona, Mexico, Florida, North Carolina, Wisconsin, and Montana; describes as new: *scaphila arizonana*, *oecetra? striata*, *o. distincta*, *platynota stultana*, *f. semiustana*, 7 spp. of *conchylis*, *pseudococonchylis* [n. g.] *laticapitana*, *aphelia? inquadana*, *penthina impudens*, 5 spp. of *paedisca*, 3 spp. of *semasia*, and *grapholitha? duodecimstriata*, figuring some of these; re-describes and figures *oecetra irrorata*, and figures *paedisca giganteana*. G: D. (3938)

Dewitz, Herman. Ueber die fortbewegung der thiere an senkrechten, glatten flächen vermittelt eines secretes. (Archiv f. d. ges. physiol., 1884, v. 33, p. 440-481, pl. 7-9.)

Separate, with t-p. cover. Bonn. *Emil Strauss*, 1884, p. 440-481, pl. 7-9, 23.5 X 15.5, t 18 X 10.5.

Abstract, entitled "Wie klettern die insecten an glatten wänden?" (Entom. nachrichten, May 1884, jahrg. 10, p. 125-135.)

Abstract, entitled "Locomotion of animals over smooth vertical surfaces." (Journ. Roy. micros. soc., Oct. 1884, s. 2, v. 4, p. 716-718.)

The author states that animals climb vertical smooth surfaces either by means of a fluid which acts by capillarity or is adhesive, or by atmospheric pressure; among insects the climbing is accomplished generally by means of a fluid secreted by glands, often of the tarsus, but the males of *dytiscus* and the larvae of *blepharoceridae* have suckers. As is the case with certain mites, the tarsal suckers of *dytiscus* are only used to cling to the female during copulation. Outline of the history of the subject as pertaining to insects, followed by description of mode of observation of the tarsal hairs in living flies, and account of the structure of the tarsus and its glands in some insects. Use of secretions to aid locomotion by certain dipterous, coleopterous, hymenopterous and hemerobid larvae, by springing spiders and by certain mites. G: D. (3939)

Dewitz, Hermann. Ueber rudimentäre flügel bei den coleopteren. (Zool. anzeiger. 18 June 1883, Jahrg. 6, p. 315-318.)

Separate. 4 p., 24 × 15, t 18 × 11.

The larvae and pupae of *Uptus hololeucus*, a wingless beetle, have rudimentary hind wings, showing their descent from winged ancestors. *G: D.* (3940)

Eaton, Alfred Edwin. Did flowers exist during the carboniferous epoch? (Nature. 31 July 1879, v. 20, p. 315, 10 cm.)

Rev. and abstr., entitled "Der angebliche steinkohlenzeit-schmetterling." (Kosmos, Sept. 1879, v. 5, p. 461-462, 18 cm.)

Regards *bryerleya* as an ephemerid of the same group as *Paltingenia*, and consequently as not a flower-visiting insect. *G: D.* (3941)

Edwards, W: H: Description of a new species of *Chrysothamnus*. (Trans. Kansas acad. sci. for 1879-80, 1881, v. 7, p. 69-70.)

Separate. [Lawrence, Kans., 1881.] [1] p., 24 × 16.

Describes ♂ and ♀ imago of *Chrysothamnus snowi* n. sp., from above timber line on Gray's Peak, Col.

B: P. M. (3942)

Edwards, W: H: Description of a new species of *Melittaca* from Texas. (Can. entom., June 1879, v. 11, p. 117-118.)

Describes *Melittaca julvina* n. sp., from Tex. and Col.

G: D. (3943)

Edwards, W: H: Description of preparatory stages of *Phyciodes nycteis*. (Can. entom., June 1879, v. 11, p. 101-105.)

Describes egg, different stages of the larva, and chrysalis of *Phyciodes nycteis*, with notes upon the habits, hibernation, and food-plants of the larva.

G: D. (3944)

Edwards, W: H: Description of the preparatory stages of *Cocoonympha gemma*. (Can. entom., Feb. 1879, v. 11, p. 31-35, fig.)

Describes the egg, larva in different stages, and chrysalis of *Cocoonympha gemma*; figures the larva and its head, and the pupa; discusses the number of molts of different butterfly larvae, the larva of *C. gemma* having only three molts.

G: D. (3945)

Edwards, W: H: Descriptions of certain species of diurnal lepidoptera found in the United States. (Trans. Amer. entom. soc., Oct. 1867, v. 1, p. 286-288, pl. 5.)

Describes *Hesperia pilatka* ♂, from Florida, and *H. nortoni* ♂ ♀ and *H. osyka* ♂ ♀, both from Louisiana, all new species; re-describes and figures *Limentis prosperina* ♂, describes *Iyoaena violacea* ♀, with notes on its occurrence, and on the occurrence of *Hesperia logan*, *H. nemoris* and *H. rurea*; *H. nemoris* = *H. samoset*; *H. rurea* = *H. melacomet*.

B: P. M. (3946)

Ekelberg, H. J. Om insektfångst ombord på fartyg från främmande land. (Entom. tidskr., 1880, v. 1, p. 101-103.)

Results of examination of vessels and cargoes arriving in Sweden from foreign lands; lists of insects found therein.

B: P. M. (3947)

Emerton, James H: New England spiders of the family *Cpeiridae*. (Trans. Conn. acad. arts and sciences, Sep. 1884, v. 6, p. 295-342, pl. 33-40.)

Separate. [New Haven, Conn., Sep. 1884.] half-t.-p. cover + p. 295-342, pl. 33-40, 24 × 15, t 17.5 × 10.4.

Rev. (Science record, 15 Sep. 1884, v. 2, p. 255-256, 5 cm.)

Bibliographical (14 titles) and anatomical notes on North American *Cpeiridae*; the genera *Uloborus* and *Hyptiotes* transferred to the *Cinifloridae*; acknowledgments. Characters and classification of *Cpeiridae*; descriptions and figures of 51 (6 *Cpeira*, 3 *Singa*, 2 *Tetragnathus*, 1 *Cyrtarachne* = 12 new) New England species, of 12 (*Microcpeira*, *Argyropeira* = 2 new) genera, with notes on localities of capture and on habits; most of the genera are characterized; the new generic name *Cyrtarachne* substituted for *Cyrtogaster* re-occupied.

G: D.: B: P. M. (3948)

Entomological club of the American association for the advancement of science

—Committee on nomenclature, 1875. [Report, with discussion.] (Can. entom., 1876, v. 8; Sep., p. 179-180; Oct., p. 183-184.) [Rec., 1115.]

Majority report of a committee appointed at Detroit meeting of Entomological club of A. A. S., 13 Aug. 1875, to collate and edit the views of leading North American entomologists on questions of entomological nomenclature; rules submitted by the committee, with marginal notes indicating unanimous or divided opinion upon them; provision for conservative action on these rules; discussion of the function of the committee.

B: P. M. (3949)

Entomological club of the American association for the advancement of science

—President, 1879 (Joseph Albert Lintner). Entomology in America. Address of president at the late meeting of the Entomological club of the A. A. S. (Amer. entom., 1880, v. 3, n. s., v. 1; Jan., p. 16-19; Feb., p. 30-34.)

Reprint of author's "Annual address" (Can. entom., Sep. 1879, v. 11, p. 163-175) [Rec., 3802].

B: P. M. (3950)

Entomological club of the American association for the advancement of science

—President, 1880 (S: Hubbard Scudder). Annual address before the Entomological club. . . (Amer. entom., Sep. 1880, v. 3, n. s., v. 1, p. 207-210, 162 cm.)

Annual address of retiring president of Entomological club of A. A. S., at Boston meeting, 24 Aug. 1880; brief historical notice of the study of entomology about Boston, Mass.; appeal to entomologists to study the comparative anatomy, embryology, post-embryological development, habits, structure of wings and structure of mouth-parts of insects. [See Rec., 2181.]

B: P. M. (3951)

Fay, H. T. On winter collecting. (Proc. Entom. soc. Philad., May 1862, v. 1, p. 194-198.)

List of more than 130 species of coleoptera collected near Columbus, O., during the winter months, with occasional remarks on the abundance and habitat of certain species.

B: P. M. (3952)

Fernald, C. H.: [Distribution of *tortricidae* in North America.] (Can. entom., Oct. 1879, v. 11, p. 194.)

Specimens of *retinia duplana* and *r. sylvestrana*, identical with the European forms, received from Oregon and Washington Territory; the species of *tortricidae* more abundant in the west than in the east of North America. *B. P. M.* (3953)

Fernald, C. H.: [Explanations regarding his work on the *tortricidae*.] (Can. entom., Nov. 1879, v. 11, p. 203.)

Statement of the author's progress in the study of *tortricidae*; specific larval characters of these insects; request for assistance. *B. P. M.* (3954)

Fernald, C. H.: A new *tortricid*. (Bull. Buffalo soc. nat. sci., Jan. 1882, v. 4, p. 53-54.)

Describes *eccopsis footiana* n. sp., from N. Y. and Penn. *B. P. M.* (3955)

Fernald, C. H.: [Notes on *tortrix nigridia*: condition of the types of North American *tortricidae*.] (Can. entom., Oct. 1879, v. 11, p. 195.)

Pine trees in Maine much injured by *tortrix nigridia*: parasites of these insects. Gradual destruction of the types of North American *tortricidae* by corrosion of pins; japanned pins free from corrosion. *B. P. M.* (3956)

Fischer, Ph. Notes on the larvae of some *sphingidae*. (Can. entom., Dec. 1883 [Feb. 1884], v. 15, p. 238.)

Notes on larvae of *hemoris tenuis*, *h. thysbe*, *sphinx chersis* and *a. darapsa*. *G. D.* (3957)

Forbes, H. O. Sound-producing ants. Nature, 2 June 1881, v. 24, p. 101-102, 9 cm.

A species of *polyrachis*, and another species of *formicidae* produce sounds, that of the latter species having a "singular synchronism of the movements." "The noise, resembling very heavily-falling rain, is caused by the insect striking the leaf by a series of spasmodic taps, both with its head and with the extremity of its abdomen, which it inflexes while so doing." Observations made in Sumatra. *G. D.* (3958)

Forbes, Stephen Alfred. *Bacterium* a parasite of the chinch bug. (Amer. nat., Oct. [28 Sep.] 1882, v. 16) (RILEY, C. V. Entomology . . . [Oct. 1882]), p. 824-825.

Description of observations which indicate that the alimentary canal of the bodies of *blissus leucopterus* sometimes contains great numbers of bacteria resembling *bacterium termo*, which seem to occasion the death of great numbers of the older individuals of *blissus*. *B. P. M.* (3959)

Forbes, Stephen Alfred. The food-habits of thrushes. (Amer. entom., Jan. 1880, v. 3, n. s., v. 1, p. 12-13, 53 cm.)

Notice, [by C. V. Riley], entitled "[The food-habits of thrushes]. (*op. cit.*, p. 2-3, 11 cm.)

General account of percentages of insect constituents, especially *carabidae*, in the food of *turdidae* and *lintrichidae*; and *bibio albipennis* in the food of *turdus migratorius*; census of birds examined; description of the method of the investigation. *B. P. M.* (3960)

Forbes, Stephen Alfred. The food of the bluebird, *sialia sialis*, L. (Amer. entom., 1880, v. 3, n. s., v. 1: Sep., p. 215-218, 135 cm.; Oct. p. 231-234, 156 cm.)

Review, by author, entitled "Supplementary note on the food of the blue-bird." (Amer. nat., Jan. 1881 [31 Dec. 1880], v. 15) (RILEY, C. V. Entomology . . . [Jan. 1881]) p. 66-67.

Statement of percentages of the several classes of insect and plant constituents in food of *sialia sialis* in Illinois from February to July and in December, and for these months combined; list of genera or species of insects found in the stomach of this bird; estimate of economic importance of this bird, and comparison of it with that of *turdidae*. *B. P. M.* (3961)

Forbes, Stephen Alfred. Supplementary note on the food of the blue-bird. (Amer. nat., Jan. 1881 [31 Dec. 1880], v. 15) (RILEY, C. V. Entomology . . . [Jan. 1881]) p. 66-67.

Statement supplementary to that in author's "The food of the bluebird" . . . (Amer. entom., 1880, v. 3, n. s., v. 1: Sep., p. 215-218; Oct., p. 231-234) [Rec., 3961], giving the percentages of the different constituents of the food of *sialia sialis* in August and September, with a list of insects found in stomachs of this bird during these months, and a correction of the general table of percentages, which is here reprinted. *B. P. M.* (3962)

Fuchs, C.: Synopsis of the *lucanidae* of the U. S. (Bull. Brooklyn entom. soc., 1882, v. 5: Nov., p. 49-52, fig. 1-5; Dec., p. 57-60, fig. 6-9, 12-14; pl.)

Separate. Brooklyn, 1882. 1-p. cover + 1-p. + 8 p., 1 pl. 22 X 15, 16 X 10 2.

Dichotomic tables of genera and species of the *lucanidae* of United States, with lists of synonymy, descriptions of differential characters, and figures of antennae; the plate contains figures of imago of all the species, and of larva of *lucanus dama* and *ceruchus ficus* and pupa of *c. ficus* and *passalus cornutus*. *B. P. M.* (3963)

Fuller, Andrew S. An intelligent wasp. (Amer. entom., July 1880, v. 3, n. s., v. 1, p. 167-169, 71 cm., fig. 71.)

Observations on the habits of *stizus speciosus* in transporting and burving *cicada canicularis* as food for its young; figure of imago. *B. P. M.* (3964)

Fyles, T. W. *Sphinx eremitus*. (Can. entom., March 1879, v. 11, p. 59-60.)

Quotes Prof. F. H. Snow's description of the green larva of *sphinx eremitus*, as given in Strecker's "Butterflies and moths of North America" . . . Rec., 3965, and gives a description of sepia-colored larvae of the same species. *G. D.* (3965)

Gentry, T. G.: Life-histories of the birds of eastern Pennsylvania, v. 2. Salem, Naturalists' agency 1877. 71 + 336 p., 20 X 12.5, 115 X 9

Copious list of substances which serve as the food of the several species of birds, comprising, *inter alia*, the names of insects. *B. P. M.* (3966)

Gerard, W. R. Notes on the eggs and larvae of an unknown dragon-fly. (Amer. entom., July 1880, v. 3, n. s., v. 1, p. 174-175, 60 cm., fig. 77-80.)

Description and figures of eggs, egg-mass and young larva of *Zipflax* sp.; hatching and first stages of development of the larva. B: P. M. (3970)

Giard, Alfred. De l'influence néfaste des prix de l'Académie. (Bull. scient. du Département du nord, Aug.-Sept. 1878, s. 2, année 1, p. 214-219.)

Criticizes certain young French zoologists for neglecting to cite properly earlier naturalists, in the fear of lessening their own chances of winning prizes of the Academy; as an illustration of this neglect the author makes an extract, upon the subject of the balancers of diptera, from A. J. B. Robineau-Desvoidy's "Recherches sur l'organisation vertébrale des crustacés, des arachnides et des insectes" (Paris, 1828), stating that J. Künckel d'Herculeis, and—Jouret de Bellesme, in late papers on diptera, have refrained from citing Robineau-Desvoidy's results upon the functions of the balancers. G: D. (3968)

Giard, Maurice. Note sur les bruches et en particulier, sur la bruche du haricot. Extrait du Journal de la Société centrale d'horticulture de France; 3e série, t. 1879, p. 95-99. Paris, 1879. 4 p., 22 X 14, t 17 X 9.5. Rev. (L'abeille, 1879, v. 17; Nouv. et faits div., no. 24, p. 94.)

On *bruchidae*; especially on *bruchus obtectus*, and on means for destroying it. G: D. (3969)

Gissler, Carl Friedrich. Coleopterous larvae of *tenebrionidae* in general. (Bull. Brooklyn entom. soc., June 1878, [v. 1], no. 2, p. 11.)

The larvae of *tenebrionidae* all traceable to scarcely three typical larval forms, here distinguished. B: P. M. (3970)

Gissler, Carl Friedrich. On coleopterous larvae of the family *tenebrionidae*. (Bull. Brooklyn entom. soc., Jul. 1878, [v. 1], no. 3, p. 18-19, fig. 4-5.)

Description of egg and larva of *Aeodes gigantea* and of larva of *A. dentipes*; figure of larva and structural details of the former, and of pygidium and leg of the latter. B: P. M. (3971)

Gissler, Carl Friedrich. On coleopterous larvae of the family of *tenebrionidae*. (Bull. Brooklyn entom. soc., Mch. 1879, [v. 1], no. 11, p. 85-88, pl. [1].)

Anatomical and embryological notes on larvae of *tenebrionidae*; pygidial differences of genera; figures of mouth-parts, pygidia and antennae. B: P. M. (3972)

Gissler, Carl Friedrich. Die nordamerikanischen verwandten der spanischen fliege. (Deutsch-amer. apotheker-zeitung, 1880, Jahrg. 1: 1 July, no. 8, p. 2-3, 45 cm.; 15 July, no. 9, p. 2-3, 35 cm.)

List of "158" species of North American *meloidae*, with indication of the more and most common species, with a view to ascertain the applicability of these species to pharmaceutical puposes. B: P. M. (3973)

Gissler, Carl Friedrich. Ueber den Ursprung des schild-lack's. (Deutsch-amer. apotheker-zeitung, 1 Dec. 1880, Jahrg. 1, no. 18, p. 2, 40 cm.)

Extract, in Germ. tr., from J. M. Stillman's "On the origin of the lac" (Amer. nat., Nov. [23 Oct.] 1880, v. 14, p. 782-783) [Rec., 2792, 3555]; notice of erroneous statements in encyclopaedias concerning lac; formation of lac as an insect secretion. B: P. M. (3974)

Gray, Arthur F. A complete list of the scientific papers of Thomas Bland, F. G. S., from 1852 to 1883. Salem, 1884. t.-p. cover, 12 p., 24.5 X 15, t 16 X 9.8.

Notice. (Amer. nat., Oct. 1884, v. 18, p. 1074.)

List of 72 papers by Bland or by him jointly with W. G. Binney; most of the papers are upon mollusca, a few upon insects. G: D. (3975)

Greene, C. A. An essay on insects injurious to vegetation and how to get rid of them. . . . [Harrisburg, Pa., 1883 or 1884.] t.-p. cover, 12 p., 22 X 15, t 19 X 11.2.

[The title contains 163 words!] The first nine pages are devoted to a criticism of the modes of study of noxious insects by entomologists, and especially by the United States Entomological commission and the United States Department of agriculture; the last three pages contain advertisements of "omnipathy," a special mode of treatment by Dr. Greene. G: D. (3976)

Gregson, C. S. Natural history nomenclature. (Entomologist, April 1885, v. 18, p. 118-120.)

Numerous citations of technical names of animals derived from names of persons, as a defence of the use of such names in science. G: D. (3977)

Grote, A.; Radcliffe. [Capture of *audela acronyctoides*.] (Can. entom., Nov. 1879, v. 11, p. 204.)

A male of *Audela acronyctoides* captured at light in New York in Aug. 1879; first occurrence of the species in New York. B: P. M. (3978)

Grote, A.; Radcliffe. Description of *zeugophora reinweckeri*. (N. A. entom., July 1879, v. 1, p. 5, pl. 1, fig. 6.)

Description and figure of imago of *zeugophora reinweckeri* n. sp., from *populus*. B: P. M. (3979)

Grote, A.; Radcliffe. [Distribution of *scoliopteryx libatrix*.] (Can. entom., Oct. 1879, v. 11, p. 195.)

Geographical distribution of *scoliopteryx libatrix*. B: P. M. (3980)

Grote, A.; Radcliffe. Illustration of microlepidoptera. (N. A. entom., Mch. 1880, v. 1, p. 67-68, pl. 5.)

Figures the neuration and head of *procrasna similis*, the neuration of *melanomma auricularia*, the forewings of *oedis funalis*, *pempelia contatella*, *p. contatella* var. *quinguepunctella*, *crambus evesus*, *c. dissectus*, *c. oregonicus*, *tetralopha dilucella* and *epigraptha eruditella*, and the head of *propeplus edonis*, with references to the descriptions of these species; *dokrana turbatella* = *pempelia (dokrana) grossulariae*. B: P. M. (3981)

Grote, A.: Radcliffe. [Melanism in *pseudohazis eglanterina*.] (Can. entom., Sep. 1879, v. 11, p. 175.)

Specimens of *pseudohazis eglanterina*, collected on top of Mt. Shasta, were almost entirely black above; this variation supposed to be due to climate.

B: P. M. 3982)

Grote, Augustus Radcliffe. On the moths collected by Prof. Snow in New Mexico. (Trans. Kans. acad. sci., 1881-1882. Topeka, 1883, v. 8, p. 45-57.)

Remarks on geographical distribution of lepidoptera; describes *alpyloides* (n. g.), *fluvilinguis*, *pygocampa* (n. g.), *junerea*, *alexicles* (n. g.), *aspera*, *agrotis territorialis*, *a. incuncta*, *ammocoma distichoides*, *manestra vittata*, *m. minima*, *homohadena epifashia*, *topimamestra occidentalis*, *trichorthosia* (n. g.), *parallela*, *celiptera buxiana*, *eltopia vitraria*, *eubrya mexicana*, *phigalia lixaria*, *lychnosea* (n. g.), *aulularia*, *chryseideton avernalis* [5 n. gen., 17 n. sp.]; quotes other descriptions.

G: D. 3983)

Grote, A.: Radcliffe. A new *epigraphia*. (N. A. entom., Jan. 1880, v. 1, p. 53.)

Describes *epigraphia eruditella* n. sp., from Massachusetts.

B: P. M. 3984)

Grote, A.: Radcliffe. A new *eustrotia*. (N. A. entom., Mch. 1880, v. 1, p. 66-67.)

Describes *eustrotia parvimacla* n. sp., from Texas, comparing it with *e. concinnimacula*, of which it probably is a race.

B: P. M. 3985)

Grote, A.: Radcliffe. A new *eustrotia* and *thalpochares*. (N. A. entom., Dec. 1879, v. 1, p. 46-47.)

Describes *eustrotia dividua* n. sp., from Texas, and *thalpochares aetheria* n. sp., from Florida.

B: P. M. 3986)

Grote, A.: Radcliffe. A new *halesidota* collected by Professor Snow. (N. A. entom., Dec. 1879, v. 1, p. 46.)

Remarks on the value of the labors of F. H. Snow; describes *halesidota trigona* n. sp., from Colorado.

B: P. M. 3987)

Grote, A.: Radcliffe. A new *pinipestis*. (N. A. entom., Mch. 1880, v. 1, p. 67.)

Describes *pinipestis renicella* n. sp., from north-eastern United States.

B: P. M. 3988)

Grote, A.: Radcliffe. New species of moths. (N. A. entom., May 1880, v. 1, p. 91-95.)

Describes *agrotis dolis*, *a. sublatris*, *hadena hulstii*, *gortyna servata*, *apatele thoracica*, *oedis simulatilis* and *asopia plautalis* from Colorado, *agrotis vorthingtoni* from Indiana, *agrotis baileyana* from N. Y. and N. H., *agrotis infumalis* from California, and *psenoda glossa scobialis* from New York, all as new species, characters of *anytus sculptus*, now considered a species of *agrotis*; habits of *pseudoglossa lubricalis* and occurrence of this species in California.

B: P. M. 3989)

Grote, A.: Radcliffe. A new *tortrix*. (N. A. entom., Oct. 1879, v. 1, p. 29-30.)

Describes *tortrix (ptycholoma) dissimilana* n. sp., from New York.

B: P. M. 3993)

Grote, A.: Radcliffe. New western *noctuidae*. (N. A. entom., 1879, v. 1: Nov., p. 38-39; Dec., p. 43-46.)

Describes *pyrrhia stilla* n. sp., and 10 new species of *agrotis*, from Colorado; remark on the characters of *agrotis venilis*.

B: P. M. 3991)

Grote, A.: Radcliffe. New western *noctuidae*. (Trans. Kansas acad. sci. for 1879-80, 1881, v. 7, p. 63-69.)

Describes imago of *hadena discors* and *gortyna juvenilis* = 2 new species, and re-describes imago of *halesidota trigona*, 11 species of *agrotis*, *pyrrhia stilla* and *catocha para* Halst., from Idaho Springs, Col.

B: P. M. 3992)

Grote, A.: Radcliffe. [Note on *oiketicus abbotti*.] (Can. entom., Nov. 1879, v. 11, p. 201.)

Larva cases of *oiketicus abbotti* (sp. non descr.) found on cotton plant; literary history of the species.

B: P. M. 3993)

Grote, A.: Radcliffe. Paris green. (N. A. entom., Sep. 1879, v. 1, p. 22.)

Opposition to the use of Paris green as an insecticide, by reason of its liability to injure domestic animals, including humans.

B: P. M. 3994)

Grote, A.: Radcliffe. Note on the North American genus *hemileuca*. (Trans. Entom. soc. Lond., 1884; Proc., p. 12-13.)

Regards *eulemophorus tricolor* as belonging to the genus *hemileuca*, but *argyranthes nemogeni* as sufficiently different structurally from *hemileuca* to be properly in another genus; notes upon the variability of *h. maia*.

G: D. 3995)

Grote, A.: Radcliffe. [Ravages of *nephopteryx zimmermani*.] (Can. entom., Oct. 1879, v. 11, p. 195.)

Ravages and geographical distribution of *nephopteryx zimmermani*; objections to the use of Paris green as an insecticide; opposing opinions.

B: P. M. 3996)

Grote, A.: Radcliffe. Three new cochliopods. (N. A. entom., Feb. 1880, v. 1, p. 60.)

Describes *monoleuca sulfurea* n. sp., from Florida, *limacodes flexuosa* and *l. caesonia*, both new species, from New York; synonymical note on *limacodes latomia*.

B: P. M. 3997)

Guillebeau, A. Ueber die nachtheile, welche der parasitismus einiger oestriden ihren wirthen bringt. (Mittheil. Naturforsch. gesells. Bern . . . 1881, 1882, heft 2; Sitzungsber., p. 7-11.)

Upon species of *gastrophilus* which are parasitic in the horse, and upon *hypodermia bovis* which attacks cattle, with description of their normal habits as parasites and of the injuries which they sometimes do to their hosts.

G: P. 3998)

Haller, G. Die arten und gattungen der schweizer. hydrachnidfauna. (Mittheil. Naturforsch. gesells. Bern . . . 1881. 1882, heft 2; Abhandl., p. 18-33, 4 pl.)

The general remarks (p. 18-31) precede the systematic portion of this paper on Swiss *hydrachnidæ*, and contain: literature (11 titles); brief outline of the anatomy (mouth-parts, external glands and openings of the external covering, eyes); discusses the structure and uses of Claparède's "häufnäse," the development, and the geographical distribution of the *hydrachnidæ*.

G. D. (3999)

Hayward, Roland. *Cicindela ancociscionensis*, Harr., in Vermont. (Journ. Bost. zool. soc., July 1882, v. 1, p. 38.)

Records capture of *cicindela ancociscionensis* at Underhill, Chittenden co., Vt.

G. D. (4000)

Hayward, Roland. Habits and transformations of *bolitotherus bifurcus*. (Journ. Bost. zool. soc., July 1882, v. 1, p. 35-36.)

Brief description of larva, pupa and imago of *bolitotherus bifurcus*; notes on habits in different stages.

G. D. (4001)

Hayward, Roland. *Selenophorus ellipticus* at Nantucket. (Journ. Bost. zool. soc., Jan. 1882, v. 1, p. 10.)

Records occurrence of *selenophorus ellipticus* at Nantucket, Mass.

G. D. (4002)

Hayward, Roland. Two rare *carabidae* from eastern Massachusetts. (Journ. Bost. zool. soc., July 1882, v. 1, p. 37-38.)

Records capture of *calosoma wilcoxi* and *badister notatus* in eastern Massachusetts.

G. D. (4003)

Henry, W. A. Poplar stem gall-lice fed on by squirrels. (Amer. entom., Aug. 1880, v. 3, n. 8., v. 1, p. 205-206, 21 cm., fig. 110.)

Galls of *peniphigus populianalis* on *populus monilifera*, at Ithaca, N. Y., opened by *sciurus hudsonius*, who removes the occupants; figure of galls, and insect of the *peniphigus*.

B. P. M. (4004)

Horn, G. H. *Harpalus caliginosus*. Fab. With details. (Bull. Brooklyn entom. soc., Feb. 1883, v. 5, p. 84, fig.)

Figure of under side of imago of *harpalus caliginosus*, with details of external anatomy numbered and named.

B. P. M. (4005)

Horn, G. H. Vertical vs. horizontal insect boxes. (Amer. nat., May [16 Apr.] 1881, v. 15, p. 491.)

Crit. rev. of a pamphlet by A. Preudhomme de Borre on the "best arrangement of boxes and cartons of collections of insects;" views of the reviewer as to the proper size, construction and arrangement of such boxes.

B. P. M. (4006)

Hudson, G. Vernon. Hermaphrodite lepidoptera. (Entomologist, June 1885, v. 18, p. 168-169.)

Describes a hermaphrodite of *engonia angularia* and one of *plusia verticillata*; also a probable hermaphrodite of *vanessa gonerilla*.

G. D. (4007)

Karpelles, Ludwig. Die thierwelt im Leviticus, III buch Moses. (Verhandl. K.-k. zool.-bot. gesells. in Wien, 1885, v. 35; Abh., p. 257-266.)

Pages 202-204 give an explanation of the kinds of insects mentioned in the book of Leviticus, and the meaning and derivation of the Hebrew words used for them in the text of that book.

G. D. (4008)

Keyserling, Eugen. Neue spinnen aus Amerika. 6. (Verhandl. K.-k. zool.-bot. gesells. in Wien, jahrg. 1884 [1885], v. 34; Abhandl., p. 489-534, pl. 13.)

Describes 20 new species of American spiders of which 3 are made types of new genera (*zeala*, *agobardus*, and *epiroides*).

G. D. (4009)

Killing the apple borer. (Springfield [Mass.] d. republican, 2 July 1880, p. 2-3, 8 cm.)

From *Golden rule*. Two remedies for "the apple borer."

G. D. (4010)

Kohl, Franz Friedrich. Die gattungen und arten der larriden autorum. 1. (Verhandl. K.-k. zool.-bot. gesells. in Wien, jahrg. 1884 [1885], v. 34; Abhandl., p. 171-268, pl. 8-9.)

Table of the genera of *larridae* (incl. *trypeyxylon* and *nilela*), descriptions of some of the species, and a synonymical catalog of all the species, with notes on their habits and geographical distribution. [Continued under same title, 2. (*op. cit.*, p. 327-454) (Rec., 4012).]

G. D. (4011)

Kohl, Franz Friedrich. Die gattungen und arten der larriden autorum. 2. (Verhandl. K.-k. zool.-bot. gesells. in Wien, jahrg. 1884, [1885], v. 34; Abhandl., p. 327-454, pl. 11-12.)

Continuation of author's paper of the same title, 1. (*op. cit.*, p. 171-268) [Rec. 4011], on same subject.

G. D. (4012)

Kreithner, Eduard. Nachricht über massenhaftes auftreten der kohlweisslings in der nähe Wiens. (Verhandl. K.-k. zool.-bot. gesells. in Wien, jahrg. 1884, [1885], v. 34; Sitz.-ber., p. 27-28.)

Great numbers of *pieris brassicae* about Vienna, Austria; the damage they do to cruciferous plants, and how to reduce their numbers by destroying their eggs.

G. D. (4013)

Löw, Franz. Beiträge zur kenntniss der jugendstadien der psylliden. (Verhandl. K.-k. zool.-bot. gesells. in Wien, jahrg. 1884, [1885], v. 34; Abhandl., p. 143-152.)

Describes the larvae of *amblyrrhina cognata*, *psylla ulmi*, *trioza manra*, *t. scottii* and *t. remota*. Gives a catalog of all the species of *psyllidae* of which earlier stages have been described.

G. D. (4014)

Machleidt, G. Zwitterbildung eines tagfalters. (Jahreshefte d. Naturw. ver. f. d. fürstentum Lüneburg, 1883-1884, no. 9, p. 131, 1 pl.)

Colored figure with brief description of an apparent hermaphrodite of *spinephle lycaon*.

G. D. (4015)

MacLeod, Jules. De l'hermaphroditisme de *trombidium* mâle.

Note, appended to author's "La structure de l'intestin antérieur des arachnides" (Bull. Acad. roy. de Belgique, 1884, s. 3, v. 8, p. 377-391) [Rec., 4019].

G. D., 4010

MacLeod, Jules. Sur l'existence d'une glande coxale chez les phalangides.

Note, appended to author's "La structure de l'intestin antérieur des arachnides" (Bull. Acad. roy. de Belgique, 1884, s. 3, v. 8, p. 377-391) [Rec., 4019].

G. D., 4017

MacLeod, Jules. Sur la présence d'une glande coxale chez les galéodes (Bull. Acad. roy. de Belgique, 1884, s. 3, v. 8, p. 655-656.)

The author finds a coxal gland in *galcodes araneoides*, and describes its histological structure.

G. D., 4018

MacLeod, Jules. La structure de l'intestin antérieur des arachnides. (Bull. Acad. roy. de Belgique, 1884, s. 3, v. 8, p. 377-391, 1 pl.)

Separate. [Bruxelles, 1884.] 20 p., 1 pl., 22 X 14.5, t 15 X 8.7.

Upon the anatomy of the mouth, mouth-parts, oesophagus and glands of the anterior portion of the digestive tract in arachnoidea, based upon comparative studies of acarina, araneida, phalangida, scorpionidea, and pseudoscorpionida. To this paper are appended two notes, one entitled, "Sur l'existence d'une glande coxale chez les phalangides" and the other, "De l'hermaphroditisme de *trombidium* mâle."

G. D., 4019

Möschler, Heinrich Bruno. Die Nordamerika und Europa gemeinsam angehörenden lepidopteren. (Verhandl. K.-k. zool.-bot. gesells. in Wien, jahrg. 1884. [1885], v. 34: Abh., p. 273-320.)

Gives a list, with many notes on varieties and distribution, of 243 species of lepidoptera common to both Europe and North America. To this list Alois F. Rogenhofer contributes a "Zusatz" (p. 310-320), in which 6 more species are added.

G. D., 4020

Osborne, J. A. Parthenogenesis in a beetle. (Nature, 4 Sept. 1879, v. 20, p. 430, 15 cm.)

Notes parthenogenesis of *gastrophysa raphani*, probably the first case of that form of reproduction noticed among coleoptera.

G. D., 4021

Osborne, J. A. Parthenogenesis in coleoptera. (Nature, 30 Sept. 1880, v. 22, p. 509-510, 40 cm.)

Notice. (Amer. nat., Dec. [25 Nov.] 1880, v. 14, p. 899.)

Reprint, entitled "Parthenogenesis in the coleoptera." (Entom. mo. mag., Nov. 1880, v. 17, p. 127-130.)

Abstract, entitled "Parthenogenesis bei käfern." (Entom. nachrichten, 15 Jan. 1881, jahrg. 7, p. 31-32.) [Rec., 3523.]

A few general notes on parthenogenesis of arthropods, followed by a statement of the results of experiments which prove that *gastrophysa raphani* can reproduce parthenogenetically.

G. D., 4022

Osten Sacken, C: Robert. Berichtigungen und zusätze zum Verzeichnisse der entomologischen schriften von Camillo Rondani. (Verhandl. K.-k. zool.-bot. gesells. in Wien, jahrg. 1884. [1885], v. 34: Abhandl., p. 117-118.)

Additions to the author's "Verzeichniss der entomologischen schriften von Camillo Rondani" (op. cit., 1881, v. 31, p. 337-344) [Rec., 4020].

G. D., 4023

Osten Sacken, C: Robert. Elenco delle pubblicazioni entomologiche del professor Camillo Rondani. (Bull. Soc. entom. ital., 1885, an. 17, p. 149-162.)

List of the 131 entomological papers or works by Camillo Rondani, extending from 1840 to 1880.

G. D., 4024

Osten Sacken, C: Robert. Facts concerning the importation or non-importation of diptera into distant countries. (Trans. Entom. soc. Lond., 1884, p. 489-496.)

Discusses the extensive distribution of *eristalis tenax* and how it came into North America; asks why *sarcophaga carnaria* has not reached America, while so many other common European species are found in North America; discusses the mode of ingress of *psilopus pallens* into North America, of *culer* into the Sandwich Islands, and of *syrphus pyrastri* into the western United States and into Chili.

G. D., 4025

Osten Sacken, C: Robert. Verzeichniss der entomologischen schriften von Camillo Rondani. Als nachtrag und fortsetzung zu dem betreffenden artikel in H. A. Hagen's Bibliotheca entomologica. (Verhandl. K.-k. zool.-bot. gesells. in Wien, jahrg. 1881, v. 31: Abhandl., p. 337-344.)

List of Rondani's entomological papers in addition to and correction of that given by Hagen in his Bibliotheca entomologica [Rec. 336]. The present list carries the number of entomological papers up to 120. See also the author's "Berichtigungen und zusätze zum Verzeichnisse der entomologischen schriften von Camillo Rondani" (op. cit., 1881, v. 34: Abh., p. 117-118) [Rec. 4023].

G. D., 4026

Osten Sacken, C: Robert. Verzeichniss der entomologischen schriften von Hermann Löw. Als nachtrag und fortsetzung des betreffenden artikels in H. A. Hagen's Bibliotheca entomologica. (Verhandl. K.-k. zool.-bot. gesells. in Wien, jahrg. 1884, [1885], v. 34: Abhandl., p. 455-464.)

List of H. Loew's papers, in addition to those enumerated by Hagen in his Bibliotheca entomologica [Rec., 330], bringing the number of Loew's papers up to 222.

G. D., 4027

Patton, W: Hampton. Some notes on the classification and synonymy of fig-insects. (Trans. Entom. soc. Lond., 1884: Proc., p. 14-17.)

The author gives reason why he cannot accept the view of Sidney Smith Saunders that the *agoonidae* belong in the *cyrtipidae*; gives the characters of the *cyrtipidae* and of the *chalcididae*, to the latter of which the author believes the family *agoonidae* belongs; characters defining the *agoonidae*; synonymy of some of Francis Walker's descriptions of fig insects.

G. D., 4028

Peal, S. E. Sound-producing ants. *Nature*. 22 Sept. 1881, v. 24, p. 484. 8 cm.)

Describes synchronous tapping of species of ants, in Assam. *G. D.* (4029)

Peal, S. E. Sounds made by ants. (*Nature*. 21 Oct. 1880, v. 22, p. 583. 8 cm.)

Notes the sonification of two species of ants by means of scraping dry crisp leaves with the horny apex of the abdomen. *G. D.* (4030)

Poulton, E. B. Notes upon, or suggested by the colours, markings, and protective attitudes of certain lepidopterous larvae and pupae, and of a phytophagous hymenopterous larva. (*Trans. Entom. soc. Lond.*, 1884, p. 27-60, pl. 1.)

Discusses the origin of the red markings observed on some larvae of *sphinx* and *smertinus*, and their value in protecting these larvae; considers the origin of the white stripes in *smertinus ocellatus* and the use of the remains of the subdorsal white stripe in the last larval stage; regards the replacement of the subdorsal by the oblique white stripes as comparatively recent in larvae of *s. ocellatus*; believes that the variation of the ground color in *s. ocellatus* is phytophagic; discusses the protection sometimes gained by the changes in color of larvae just before pupation; notes some peculiar cases of protective attitudes in larvae of *geomitridae* (especially of *ephyra* and *aspilates*); discusses the protective attitude of *notodonta ziczoc* as an instance of simulated angularity; remarks upon protective coloration due to internal organs in the larva of *nematus curtispina*; classifies protection by resemblance to surrounding objects into special and general; discusses the significance of larval and pupal dimorphism, and phyletic parallelism in metamorphic species. *G. D.* (4031)

Rogenhofer, Alois Friedrich, see MÖCHLER, H. B. Die Nordamerika und Europa gemeinsam angehörigenden lepidopteren. [Rec., 4020].

Rondani, Camillo, see OSTEN SACKEN, C. R. Elenco delle pubblicazioni entomologiche. . . [Rec., 4024].

Rondani, Camillo, see OSTEN SACKEN, C. R., Verzeichniss der entomologischen schriften von Camillo Rondani. . . [Rec. 4026].

Saunders, W. The goldsmith beetle: *cotalpa lanigera*. (*Can. entom.*, Feb. 1879, v. 11, p. 21-22, fig. 9-10.)

Popular account of *cotalpa lanigera*; its food-plants, oviposition and other habits; figures of larva and imago. *G. D.* (4032)

Schaitter, Ignaz. [Libellenzüge.] (*Verhandl. K.-k. zool.-bot. gesells. in Wien*, 1880, v. 30; Sitz.-ber., p. 40.)

Flights of *libellula depressa* and *I. quadrimaculata* in Austria. *G. D.* (4033)

Schaupp, Frank G. Biological notes on, and description of the larva of *calosoma calidum*. *Fab.* (*Bull. Brooklyn entom. soc.*, Sep. 1882, v. 5, p. 33-34.)

Subject as in title. *B. P. M.* (4034)

Schaupp, Frank G. Collection notes. (*Bull. Brooklyn entom. soc.*, Aug. 1882, v. 5, p. 26.)

Pomphofoea sayi, *limenitis arthemis*, and *I. ursula* unusually abundant at North Branch, Sullivan co., N. Y., in 1882. *B. P. M.* (4035)

Schaupp, Frank G. Description of the larva of *neocyphorus tomentosus*, *Web.* (*Bull. Brooklyn entom. soc.*, Nov.-Dec. 1881, v. 4, p. 37-38; *Jul.* 1882, v. 5, pl. 1, fig. 1.)

Description and figures of larva of *neocyphorus tomentosus*. *B. P. M.* (4036)

Schaupp, Frank G. Description of the larva of *patrobis longicornis*. (*Bull. Brooklyn entom. soc.*, Mch.-Apr. 1882, v. 4, p. 56; *Jul.* 1882, v. 5, pl. 1, fig. 2.)

Description and figures of the larva of *patrobis longicornis*. *B. P. M.* (4037)

Schaupp, Frank G. Description of the larva of *silpha americana*. *Lin.* (*Bull. Brooklyn entom. soc.*, May 1882, v. 5, p. 2; *July* 1882, pl. 1, fig. 3.)

Description and figures of the larva of *silpha americana*. *B. P. M.* (4038)

Schaupp, Frank G. On the occurrence of *amphicomu*. (*Bull. Brooklyn entom. soc.*, Feb. 1883, v. 5, p. 83.)

Extract from a letter from E. J. Ricksecker, describing the occurrence and actions of *amphicomu (dasypdera) ursina* on sand dunes near San Francisco, Cal.; notes by author, on the occurrence of *a. (lichnanthe) infipina* on sand at Coney Island, N. Y. *B. P. M.* (4039)

Schaupp, Frank G. Remarks on some coleopterous pupae. (*Bull. Brooklyn entom. soc.*, *Jul.* 1882, v. 5, p. 18; pl. 1, fig. 4-7.)

Descriptions and figures of pupae of *cicindela refofanda*, *chlaenius laticollis*, *dicolus dilatatus* and *galericita janus*. *B. P. M.* (4040)

Schletterer, August. Die hymenopteren-gattung *gasteruption* Latr., *foenus* aut. (*Verhandl. K.-k. zool.-bot. gesells. in Wien*, 1885, v. 35; *Abh.*, p. 267-326, pl. 14.)

Gives a description of the genus *gasteruption* Latr. = *foenus* Fabr.), a description of the European species with complete synonymy, a description of the exotic forms in the collection of the imperial court at Vienna, a catalog of all the species, and a quotation in the original text of the descriptions of all the species unknown to the author. Of American species re-describes *g. occidentale* (ress. Col.), describes as new species *g. tenuicollis* (Mexico), quotes the original descriptions of *g. borstoni* Westw. (Huds. Bay), *g. brasiliense* Blanch. (Brazil), *g. guildingii* Westw. (St. Vincent Isl.), *g. incertum* Cress. (Col.), *g. kirbyi* Westw. (Huds. Bay), *g. montanum* Cress. (Col.), *g. perplexum* Cress. (Col.), *g. rubicorne* Gray (Chil.), *g. rufipectum* Westw. (St. Vincent Isl.), *g. torsatorium* Say (Pa.) [and also Cresson's description 'Mass.'], catalogs *g. arca* Croup, corr. 'Ottawa', and *g. irritator*, Harris 'Mass.'. *G. D.* (4041)

Schoch, Gustav. *Ephemerella ignita* Poda, eine paedogenetische eintagsfliege. Mittheil. Schweiz. entom. gesells., Nov. 1884, v. 7, p. 48-50.)

The author, having found the abdomen of a nymph of *ephemerella ignita* filled with eggs, regards the species as paedogenetic. (G. D. 4042)

Sharp, D: Revision of the species included in the genus *tropisternus*, fam. *hydrophilidae*. (Trans. Entom. soc. Lond., 1883, p. 91-117.)

Discussion of various anatomical characters used in distinguishing genera and species of *hydrophilidae*, and of the validity of the generic name *tropisternus*; of the 33 species, 6 are new, as follows: *t. proximus* (Cuba), *t. parananus* (Parana), *t. brevicoeps* (Brazil), *t. fulvifalpis* (Mexico), *t. robinus* (Ecuador), and *t. laucifer* (Columbia); creates a new genus, *planchonius*, for *t. obscurus* Sharp (Guatemala), and describes a new species, *p. sahlergi* (Brazil); regards *t. limbalis* LeC. a synonym of *t. dorsalis* Brullé; other notes on synonymy and doubtful species. (G. D. 4043)

Smith, J: B. Coleopterological notes. (Bull. Brooklyn entom. soc., Aug. 1882, v. 5, p. 25-26.)

Mention of the names of numerous coleoptera found frequenting several species of plants respectively. (B. P. M. 4044)

Smith, J: B. Collecting *noctuidae* in day time. (Bull. Brooklyn entom. soc., Feb. 1883, v. 5, p. 82.)

Many species of *noctuidae*, especially after midsummer, can be collected by day, and especially on *solidago*; list of some *noctuidae* and *zygaenidae* so found. (B. P. M. 4045)

Smith, J: B. New *mordellidae* and notes. (Bull. Brooklyn entom. soc., Feb. 1883, v. 5, p. 80-81.)

Describes *mordellistena erratica* and *m. pratensis* from Florida, and *m. tarsalis* from Texas, new species, each from a single specimen; records *m. fusco-atra* from New Jersey and *m. splendens* from Pa., Ill. and Fla. (B. P. M. 4046)

Snow, Francis Huntington. Additions to the list of Kansas coleoptera in 1881 and 1882. (Trans. Kans. acad. sci., 1881-1882, Topeka, 1883, v. 8, p. 58.)

Adds 49 species of coleoptera to those already known to be found in Kansas; total number of species recorded from Kansas is 1904. (G. D. 4047)

Snow, Francis Huntington. List of lepidoptera, collected near Idaho Springs, Colorado, by the Kansas university scientific expedition for 1879. (Trans. Kansas acad. sci. for 1879-80, 1881, v. 7, p. 61-63.)

List of 168 lepidoptera collected from 26 July to 8 Sep. 1879, near Idaho Springs, Col. (about 2300 metres above sea-level), and of 12 collected at Gray's Peak, Col. (elevation about 4350 metres); the list includes *catalpa relicta* and 40 species of *agrotis*. The new species are described in A: R. Grote's "New western *noctuidae*" (*op. cit.*, p. 63-69) [Rec., 3002] and in W: H' Edwards' "Description of a new species of *chrysothorax*" (*op. cit.*, p. 69-70) [Rec., 3012]. (B. P. M. 4048)

Snow, Francis Huntington. Lists of lepidoptera and coleoptera collected in New Mexico by the Kansas university scientific expeditions of 1881 and 1882. (Trans. Kans. acad. sci., 1881-1882, Topeka, 1883, v. 8, p. 35-45.)

List of 315 species of lepidoptera and 514 species of coleoptera. (G. D. 4049)

Tepper, F: Collecting on the shores of Long Island Sound. (Bull. Brooklyn entom. soc., Apr. 1883, v. 5, p. 89-90.)

List of *noctuidae* collected near Glencove, L. I.; *ptieris protodice* last taken here. (B. P. M. 4050)

Tepper, F: Description of new moths. (Bull. Brooklyn entom. soc., Jan. 1883, v. 5, p. 65-67, pl.)

Describes *attacus cinctus* and *platysamia polyomata*, new species from southern Arizona, with photolithotypic figures of these species. (B. P. M. 4051)

Tepper, F: Habitat of *melitaea colona* and *m. perdicas*, W. H. Edw. (Bull. Brooklyn entom. soc., Feb. 1883, v. 5, p. 81.)

Statement of localities at which the species named were collected in Washington Territory, though stated in W: H' Edwards' "Description of new species of butterflies" (Papilio, 26 Apr. 1881, v. 1, p. 45, 46) to have been collected in Oregon. (B. P. M. 4052)

Tyrell, J. B. Suctoria. (Trans. Ottawa field-nat. club. 1883-1884 [Oct. 1884], v. 2, no. 1, p. 86-90.)

Resumé of the anatomy and life-history of fleas (*pulexidae*), with notes upon a few species. (G. D. 4053)

Voges, Ernst. Das respirationssystem der scutigeriden. (Zool. anzeiger, 6 Feb. 1882, jahrg. 5, p. 67-69.)

Anatomy of the respiratory system of *scutigera*. (G. D. 4054)

Websdale, G. Rotheram. The death-watch and its sounds. (Entomologist, Oct. 1884, v. 17, p. 236-237.)

On smitification of *atropis pulsatorius* and *anobium tessellatum*. (G. D. 4055)

Webster, Francis M. A singular ant "cow." (National scientific jour., 1 Aug. 1882, v. 2, p. 101, col. 2, 21 cm.)

Ants attend both larva and imago of *publilia concava*, in order to obtain a fluid exuded by these homoptera. (G. D. 4056)

Weymer, Gustav. Exotische lepidopteren. 2. (Entom. zeit., . . . Stettin, Jan.-Mar. 1884, v. 45, p. 7-28, pl. 1-2.)

Describes and figures 10 new species of *danaidae* and *heliconiidae*, of which *leucothyris paula* is from Veragua, Central America, and the rest from South America; gives synonymical notes on 5 other species. (B. P. M. 4057)